

Appl. No. 09/740,601

R E M A R K S

Claims 1, 16, 23 and 25 have been amended. Claims 2-15, 17-22 and 24 stand as previously presented.

Claims 1-25 were considered in the Office Action.

5 Claims 1-25 stand rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. Claims 1-6, 13-19, 22 and 23 stand rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Publication 63-223927 by Hashimoto. Claims 7-12, 20, 21, 24 and 25 stand rejected
10 under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of U.S. Patent 5,805,867 to Kodaira.

The independent claims have been amended to include accessing the selected symbol table to display at least one symbol while debugging software. Applicants believe that the
15 claims provide a useful, concrete and tangible result.

Support for the amendments to the independent claims is found, for example, in the Specification at page 9, line 31 - page 10, line 9, at page 10, lines 26-33, and at page 15, lines 17-26. No new matter has been added.

20 The Invention of Claim 1

The cited references do not disclose or suggest:

"A method of debugging, comprising:

providing a plurality of symbol tables in a computer system, said computer system having an address pointer, each
25 of said symbol tables encompassing a range of addresses, each of said symbol tables being associated with at least one symbol in common but with different memory offsets;

selecting at least one of said plurality of symbol tables within whose range of addresses said address pointer is

Appl. No. 09/740,601

pointing, wherein said at least one symbol table is selected based on said address pointer; and

accessing said at least one selected symbol table to display at least one symbol while debugging software associated with said plurality of symbol tables."

(Claim 1, as amended, emphasis added)

The above highlighted features which differentiate the present invention from the cited references are features that are not anticipated by the cited references and would not have been obvious to a person with ordinary skill in the art having the cited reference. Hashimoto appears to disclose a debug system in which multiple symbol tables are provided for multiple programs, wherein each symbol table holds "program identification information" that uniquely identifies the plural programs. Symbol tables are not automatically selected based on an address pointer in Hashimoto. Rather, a debugger command is used to load a symbol table: "at start of debugging of the program, by reading the symbol table into the debugger **by means of the debugger command...**" (Page 3, fifth full paragraph, sentence 1, emphasis added) Once the symbol table is loaded, a symbol field may be retrieved using the program identification field. (Page 3, seventh full paragraph, sentence 1) Note that the program identification information is not an address pointer, but a program name. (Page 3, fifth full paragraph, sentence 1) This does not disclose or suggest the use of multiple symbol tables, all associated with at least one symbol in common but with different memory offsets, and selecting one of the symbol tables based on an address pointer. For at least these reasons, the Applicants believe that claim 1 is allowable over the cited references and respectfully request reconsideration.

Dependent claims 2-15 ultimately depend upon independent

Appl. No. 09/740,601

claim 1 which is allowable over the cited art as discussed above. These dependent claims are likewise in condition for allowance at least because they depend on an allowable independent claim. However, dependent claims 2-15 are
5 independently allowable at least in that they recite particular features which, when combined with the elements of the independent claim, are not disclosed or suggested in the cited references. For example, regarding claims 2 and 4, Hashimoto does not disclose that either the debugger or a
10 computer selects the symbol table, but only that a "debugger command" is issued. It appears, therefore, that a user selects the symbol table. Regarding claim 3, the cited portion of Hashimoto appears to be directed to the retrieval of a symbol from a symbol table, not the selecting of a symbol
15 table itself, and the cited portion of Hashimoto does not discuss the transition from executing mode to command mode. Regarding claims 5 and 6, Hashimoto does not disclose the use of a program counter or a pointer to a memory location containing instructions to be executed as the basis of a
20 symbol table selection. As discussed above, Hashimoto indicates that the program identification field contains the program name.

The Invention of Claim 16

The cited references do not disclose or suggest:

25 "An apparatus for debugging software, the apparatus comprising:
a) at least one computer readable storage medium; and
b) computer readable program code stored on the at
least one computer readable storage medium, the computer
30 readable program code comprising:
code for selecting one of a plurality of symbol

Appl. No. 09/740,601

tables if a program counter in a computer contains an address within said one of said plurality of symbol tables; and

code for accessing said one selected symbol table to display at least one symbol while debugging software associated with said plurality of symbol tables."
(Claim 16, as amended, emphasis added)

Applicants repeat the arguments for allowability set forth above with respect to claim 1, but specifically directed to the apparatus set forth in claim 16.

Dependent claims 17-22 ultimately depend upon independent claim 16 which is allowable over the cited art as discussed above. These dependent claims are likewise in condition for allowance at least because they depend on an allowable independent claim. However, dependent claims 17-22 are independently allowable at least in that they recite particular features which, when combined with the elements of the independent claim, are not disclosed or suggested in the cited references.

The Invention of Claim 23

The cited references do not disclose or suggest:

"A debugging apparatus, comprising:

a computer having a plurality of symbol tables stored thereon;

a debugger connected to said computer;

means for automatically selecting at least one of said plurality of symbol tables in said computer for said debugger; and

means for displaying at least one symbol from said at

Appl. No. 09/740,601

least one selected symbol table while debugging software associated with said plurality of symbol tables with said debugger."

(Claim 23, as amended, emphasis added)

5 Applicants repeat the arguments for allowability set forth above with respect to claim 1, but specifically directed to the apparatus set forth in claim 23.

Dependent claim 24 depends upon independent claim 23 which is allowable over the cited art as discussed above.

10 This dependent claim is likewise in condition for allowance at least because it depends on an allowable independent claim. However, dependent claim 24 is independently allowable at least in that it recites particular features which, when combined with the elements of the independent claim, are not
15 disclosed or suggested in the cited references.

The Invention of Claim 25

The cited references do not disclose or suggest:

"An apparatus for debugging software in a computer having a plurality of processing cells and having a plurality of
20 symbol tables stored thereon, each of said plurality of symbol tables having a cell identification to indicate for which of said plurality of processing cells it is intended, the apparatus comprising:

a) at least one computer readable storage medium; and
25 b) computer readable program code stored on said at least one computer readable storage medium, the computer readable program code comprising:

code for selecting at least one symbol table which

Appl. No. 09/740,601

is intended for use with the processing cell which is
executing said computer readable program code, wherein
said at least one symbol table is selected if a program
counter in said computer contains an address within said
at least one symbol table; and

code for accessing said at least one selected symbol
table to display at least one symbol while debugging said
software that is associated with said plurality of symbol
tables."

(Claim 25, as amended, emphasis added)

Applicants repeat the arguments for allowability set
forth above with respect to claim 1, but specifically directed
to the apparatus set forth in claim 25. Although Kodaira does
disclose a multi-processor simulation apparatus, neither
Hashimoto nor Kodaira disclose code for selecting a symbol
table based on a program counter. Therefore, the combination
does not disclose or suggest every element of claim 25.

The Applicants believe that the currently pending claims
are allowable over the cited references and respectfully
request the timely issuance of a Notice of Allowance.

Dated: 12/10/04

Respectfully submitted,
KLAAS, LAW, O'MEARA & MALKIN, P.C.

By:

Guy K. Clinger
Guy K. Clinger, Esq.
Registration No. 42,422
1999 Broadway, Suite 2225
Denver, CO 80202
(303) 298-9888
Fax: (303) 297-2266